A Novel Diastereoselective Synthesis of (Z)-Fluoro-alkenes *via* a Nozaki-Hiyama-Kishi Type Reaction

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Experimental Section.

General: ^{19}F NMR (282.5 MHz), ^{13}C NMR (75.5 MHz) and ^1H NMR (300 MHz) spectra were recorded on a 300 MHz spectrometer. All samples were taken in CDCl_3 solvent unless noted otherwise. All chemical shifts are reported in parts per million downfield (positive) of the standard : TMS for ^1H and ^{13}C , CFCl_3 for ^{19}F NMR. Coupling constants (J) are given in cycles per second (Hz). ^1H - and ^{13}C -NMR peaks were assigned using standard COSY, HMQC and HMBC experiments. All reactions were carried out in oven-dried glassware that was placed under vacuum while hot and cooled under argon. Column Chromatographies were performed on silica gel (70-230 mesh). THF was dried by refluxing and distilling under argon from sodium benzophenone dianion, DMF was distilled under argon at reduced pressure from CaH_2 or BaO , and free of oxygen. All reagents were obtained from commercial sources, or prepared from the literature. Anhydrous CrCl_2 , more than 99% pure was important for the yield of the reaction. The bromofluorolefins were prepared by our method.⁸

Compound 2a :

Compound 2b :

Compound 2c :

Compound 2d :

Compound 2f :

Compound 2g :

Compound 2h :

Compound 2i :

Compound 2j :

Compound 2k :

Compound 2l :

Compound 2m :

Compound 2n :

Compound 2p :

Compound 2q :